

February 26, 1999

Shira Perlmutter  
Associate Register for Policy and International Affairs  
*Via Facsimile: 202/707-8366*

Dear Ms Perlmutter:

Attached is a copy of James Bosco's written testimony for the upcoming Distance Education hearing on January 26 or 27, 1999 in Washington DC. James Bosco, Ph.D. is the Chair of the Consortium for School Networking, a professor at Western Michigan University and a well regarded expert on distance learning, students and faculty.

For further information regarding this testimony please contact Leslie Harris & Associates at 202/478-6301. Thank you.

Sincerely,

Leslie Harris

**TESTIMONY OF JAMES BOSCO, PH.D.**  
**PREPARED FOR THE UNITED STATES COPYRIGHT OFFICE**  
**ON THE PROMOTION OF DISTANCE EDUCATION THROUGH DIGITAL**  
**TECHNOLOGIES**  
**January 26, 1999**

My name is James Bosco and I am the Chairman of the Board of the Consortium for School Networking. The Consortium for School Networking (CoSN) is an organization comprised of corporations involved with the development of information technology products and services as well as school districts, states education agencies, other educational organizations, institutions of higher education, and individuals.

The Consortium for School Networking has as its goal the expansion of access for K-12 students and teachers to networked information technology and the continuing improvement of school personnel to make use of such resources to improve the quality of learning in our schools.

CoSN's programs are focused in three areas. The first is leadership enhancement. CoSN engages in programs and activities to improve the capabilities of persons in leadership positions at the national, state and local levels to ensure that information technology has a direct and positive impact on student learning. The second is advocacy. CoSN maintains a strong and effective voice in policy formation and implementation at the federal level to ensure that the interests of all students in our schools are served by law and policy at the federal level. The third is coalition building. CoSN actively fosters partnerships and collaboration with other organizations, government agencies, businesses which can be used to improve access, equity, improved performance of networking technology in schools, and impact of information technology on student learning, and increased teacher productivity.

As you can see from this brief description of CoSN, the issue of distance education is of great importance to us and I appreciate this opportunity to provide testimony. We have followed the development of the Digital Millennium Copyright Act with great interest and much of our interest is focused on the nature of the recommendations pertaining to distance education which the Copyright Office's recommendations will provide for Congress.

Most people understand that the quality of American education is an integral element in the maintenance of the economic security of our Nation. Our ability to use distance education effectively will be an increasingly dominant element in our ability to meet the Nation's educational needs. It is critical that the implementation of the Digital Millennium Copyright Act occur in a way which does not provide constraints which compromise our ability to use the powerful new resources which information technology provides.

The recommendations which the Copyright Office is constructing will play a critical role in assuring that our Nation will be able to use distance education as a powerful tool to meet increasing educational needs. Even with sound recommendations from you the educational community faces many difficult problems. We need to expand our ability to craft quality distance education programs. We need to resolve a host of policy questions at the state and local level which impinge on the use of distance education in our schools and colleges. Also, we need to confront serious economic issues which pertain to access. Thus, while wise and effective recommendations from the Copyright Office will not solve all of the problems that lie before us, without sound

recommendations from you all that we can do subsequently may be of little consequence in deriving the full measure of benefit of distance education to help our young people acquire the skills and knowledge they will need to survive in the next century.

Distance education is not new. The need to reach out over the space that separates teachers from learners is not a phenomenon of the information age technology. It is worth noting that when we speak of "distance education" we do so from the perspective of the teacher who is distant from the students. Yet the real salience of this approach is that through the techniques of distance education needed instruction is made to be proximate to the student. Perhaps it would have been better had we taken the term from frame of reference of the student and called it closeness education! Indeed, over the next several years we can - if we do it right - see a situation where quality education is more abundant where and when it is needed than we might have ever dreamed might be possible.

In a sense, the book was the earliest form of distance education since it enabled a teacher to package instruction in a form which could be transported over space to students who cared to learn from it. The quest to find better ways to overcome the obstacle of the space separating teachers from students was intensified with the development of communication technologies. In the earliest days following the invention of the telephone when people were trying to figure out what purpose this strange new invention might serve, one of the proposed uses was as a means of distance education.

Over the past years, distance education has been accomplished using a variety of approaches and technologies. The oldest form of what might commonly be thought of as distance education - the book aside - is correspondence courses. These use mail service as a means of delivery. In the 1950s, broadcast television became a widely used means for providing many types of courses. More recently satellite transmission and closed circuit analog television via landlines has been used.

The newest form of distance education makes use of the World Wide Web capability of the Internet. With the increasing ubiquitousness of the World Wide Web and with the ever improving capability of the World Wide Web to carry video and audio, the role of the World Wide Web or its progeny as the prime delivery vehicle for distance education seems assured. Thus, digital technology will be - at least in the future as far as we can see it from this vantage point - dominant in the implementation of distance education.

Almost all forms of distance education entail some sort of interactivity. In earlier forms of distance education the interactivity was limited and awkward. The student using a correspondence course or a course being delivered on broadcast television sends his or her work or tests to the teacher who checks them over and returns them. Broadcast distance education sometimes provided for interaction with the teacher through a telephone.

Closed circuit two way interactive television initially, and the Internet subsequently, have enabled distance education to incorporate high quality interactivity. Distance education delivered via two-way interactive television

enables students to interact with the teacher and to ask or respond to questions. Of course, in a distance education course with many students in various sites the teacher may need to put some limitations on the amount of participation from the students. The need for the teacher to hold down the interaction is often reduced since students are often disinclined to interact too freely with teacher in such a setting.

The Internet provides a particularly effective means of dealing with the problem of facilitating interactive instances when the delivery of the instruction is asynchronous. Asynchronous communication not only provides the convenience for the student to engage in the learning at any time but, asynchronous communication also enables the teacher to engage in one-on-one interaction with a large number of students. In this way, the teacher can be particularly responsive to the students' needs. Distance education when delivered via the Internet can provide the student with a relationship with the teacher that approximates a tutorial situation.

There are four major clienteles for distance learning as it will emerge in the next several years. The first is comprised of persons who are making use of distance learning in conjunction with job related responsibilities. Distance education provides a means for corporations to meet expanded training demands in a cost effective way. The second is comprised of persons who are interested in distance learning courses as a recreational and leisure activity. Producers of materials for the Internet see "edutainment" as a strong market area. The third clientele is comprised of persons seeking higher education. Throughout the United States we are witnessing a profusion of "virtual universities." My own state of Michigan is moving ahead to develop a virtual university with strong support from the governor's office. In some instances, virtual universities are in competition with traditional four year institutions. In other cases, such as in Michigan, the Michigan Virtual University is working in partnership with higher education institutions in the state. The fourth clientele is particularly germane to the involvement of CoSN. This is the clientele comprised of K-12 students. Over the next several years, we can expect an expansion of distance education directed to young people of elementary and secondary age.

There are several reasons for the anticipated increases in distance education aimed at the K-12 audience. The first of these is that schools will find distance education particularly valuable in providing instruction in areas where a teacher who can provide the needed instruction on site in the school is unavailable. For example, many schools do not have the numbers of students required in order to support a teacher who can provide advanced language instruction. Second, distance education provides schools with a means to reach home bound students. Third, many schools and communities are developing after school centers for elementary and secondary students to extend and enrich the learning which occurs during the school day. These centers will provide a good venue for distance education.

In his book, *How the World Was One*, Arthur Clarke comments, "We have not reached the stage when virtually anything we want to do in the field of communications is possible: the constraints are no longer technical, but economic, legal, or political." Certainly this comment is quite appropriate

when we consider the issue of distance education. Even though there is still work to be done to provide the bandwidth to accommodate the information which needs to be sent up and down the channel to accommodate distance education, the accomplishment of this work is moving rapidly and, as Clarke comments, the technical issues will not be the constraint. I would like to offer some comments on two types of issues which constraint the development of distance education and which we need to solve if the young people of the United States are to enjoy the incredible benefits of expanded learning opportunity which can come from distance education.

The first of these pertains to the effective instructional design of distance education. Just as film-makers learned that movies were not just plays on a screen, distance education at its most effective is not just classroom instruction carried over an electronic distribution system. Film-makers came to understand motion pictures as a new dramatic form. So too is it necessary to recognize that distance learning is a new instructional form. As such, distance learning will be a powerful tool for those who are working hard to find more effective means of connecting with students in our schools. The task before us is to create a new form - or new forms - of instruction which do not try to emulate classroom instruction, even effective classroom instruction, but which take advantage of the resources offered by distance education, such as teleconferencing, email, access to the information and personnel on the Internet, video, and audio. In effect, the instructional designer has been given a new palette to create new instructional forms.

Teaching children in classes grouped according to age seems perfectly natural and logical. Yet, three centuries ago when the great educational reformer John Amos Comenius wrote about "simultaneous instruction" it was a novel concept and teachers continued to attempt to work with groups much as they might work with students on the more familiar tutorial manner for many years after grouping was being done in schools. Distance education challenges us to disenthral ourselves from the past and construct new learning environments. When these environments exist in the context of the Internet there is the opportunity for the education to occur in the richest informational and human network which has existed on our planet. The design of distance education will find ways to connect with the resources of the Internet. Of course, the task of constructing the new instructional forms which distance education offers is a challenge for those who are developers of applications in the private and public sectors.

Let me give two examples of effective use of distance education. The first is a series called "French in Action" which was developed though funding provided by the Annenberg Foundation. This course makes use of the immersion approach to language teaching and follows a story line of following a couple of young people in France. The course makes use of video with interviews of people on the street, segments from French TV, and clips from French films. In effect, the course picks up the student and transports him or her to France to encounter the language within the social and cultural context from which it derives.

The other example is a course in writing that has been taught by a colleague of mine. Virginia Little has used distance education to teach writing to

students throughout Kalamazoo County. This course has been extremely successful both in helping kids acquire good writing skills and also in getting kids "turned on" to writing. The course makes strong use of the interactions among the students. The students provide a real audience for the writing which they all do as well as and a resource for one another in critiquing the writing which is done. Ms. Little also shares her own writing with the students so in effect everyone involved in the course becomes both a teacher and a learner. Additionally, Ms. Little brings other resource people to the course and she can, and does, select her colleague teachers from anywhere in the world.

Let me turn briefly to the legal issues. CoSN is an organization that is based on the belief that the private sector and the public sector must work together in a win-win manner if we are to achieve the promise of information technology in our schools. We fully recognize the need to protect intellectual property. Indeed, the constituency of CoSN contains members with serious proprietary interest protected by copyright. Historically, in the United States copyright laws have found the fulcrum which balances public and commercial interest. The digital transport of distance education certainly provides new and complex challenges in finding the balance point. Promiscuous use of copyright materials deters the inclination of investors to fund the production of the needed materials. Severe restrictions on the use of copyrighted materials would substantially undermine the potential from distance education by curtailing use of the resources that make distance education the powerful tool it can be.

CoSN is committed to contributing to finding the right balance to resolve the issues before us. But just as a course designed for the classroom or for video distance learning is not easily translated to a digital learning environment, laws designed to guard copyright in those venues cannot be directly transferred to their new medium. The Internet offers a new palette and a new paradigm for teaching and learning. Laws designed to balance the needs of distance learning with the rights of copyright holders must understand and embrace that new paradigm.